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(54) [Title of the Invention] IMAGE DISTRIBUTION METHOD,
IMAGE DISTRIBUTION SYSTEM, COMPUTER-READABLE RECORDING MEDIUM,
AND COMPUTER PROGRAM

(57) [Abstract]

[Problem] To provide an image distribution method that enables to provide a variety of information to a user of a user terminal.

[Solving Means] Moving images shot by video cameras 105, 106, and 107 are collected by a real-time moving image distribution server 109 and each moving image is converted into streaming data and the data is distributed. Also, the moving images from the respective video cameras are sent to an image-to-numerical conversion server 110 via the real-time moving image distribution server 109 and a LAN 104. A mobile phone 102 is connected to a desired server via a mobile communication network 101, Internet 100, and a router 103, and whereby images provided from the server can be browsed.

[Scope of Claims]

[Claim 1] An image distribution method using a server computer that provides an image via a communication network, the method characterized by:

receiving a moving image shot using a shooting apparatus mounted in at least one area in a facility, from the shooting apparatus;

converting the received moving image into streamable

data; and

in response to a request for guidance on the facility received via a communication network, sending the converted moving image in a streaming format in real time.

[Claim 2] The image distribution method according to claim 1, further characterized by:

numerically converting a crowdedness state of a shooting area, based on the shot moving image; and

in response to a request received via a communication network, sending information on the numerically converted crowdedness state.

[Claim 3] The image distribution method according to claim 1 or 2, further characterized by:

attaching a non-contact IC tag to a movable target;

disposing a receiving apparatus for receiving a radio wave transmitted from the non-contact IC tag, at a predetermined location of a shooting area of the shooting apparatus; and

changing a shooting direction of the shooting apparatus, according to detection of the non-contact IC tag by the receiving apparatus.

[Claim 4] An image distribution method using a server computer that provides an image via a communication network, the method characterized by:

inputting a moving image shot using a shooting apparatus mounted in at least one area in a facility;

converting the input moving image into streamable data and storing the data in a storage apparatus; and

in response to a request for guidance on the facility received via a communication network, sending the stored moving image in a streaming format.

[Claim 5] An image distribution system having a user terminal and a server computer that provides an image to the user terminal via a communication network, the system characterized in that the server computer comprises:

receiving means for receiving a moving image shot using shooting means mounted in at least one area in a facility, from the shooting means;

conversion means for converting the received moving image into streamable data; and

sending means for sending the converted moving image in a streaming format in real time, in response to a request for guidance on the facility received from the user terminal.

[Claim 6] The image distribution system according to claim 5, characterized by further comprising:

numerical conversion means for numerically converting a crowdedness state of a shooting area, based on the shot moving image, wherein

the sending means sends information on the numerically converted crowdedness state.

[Claim 7] The image distribution system according to claim 5 or 6, characterized by further comprising:

a non-contact IC tag attached to a movable target;

receiving means for receiving a radio wave transmitted from the non-contact IC tag, which is disposed at a

predetermined location of a shooting area of the shooting means,
wherein

the shooting means includes means for changing a shooting direction according to detection of the non-contact IC tag by the receiving means.

[Claim 8] An image distribution system having a user terminal and a server computer that provides an image to the user terminal via a communication network, the system characterized in that

the server computer comprises:

input means for inputting a moving image shot using a shooting apparatus mounted in at least one area in a facility;
and

storage means for converting the input moving image into streamable data and storing the data, wherein

in response to a request for guidance on the facility received from the user terminal, the stored moving image is sent in a streaming format.

[Claim 9] A computer-readable recording medium characterized by recording therein a program that causes a server computer that provides an image via a communication network to:

receive a moving image shot using a shooting apparatus mounted in at least one area in a facility, from the shooting means;

convert the received moving image into streamable data;
and

in response to a request for guidance on the facility

received via a communication network, send the converted moving image in a streaming format in real time.

[Claim 10] A computer-readable recording medium characterized by recording therein a program that causes a server computer that provides an image via a communication network to:

input a moving image shot using a shooting apparatus mounted in at least one area in a facility;

convert the input moving image into streamable data and store the data in a storage apparatus; and

in response to a request for guidance on the facility received via a communication network, send the stored moving image in a streaming format.

[Claim 11] A computer program characterized by causing a server computer that provides an image via a communication network to:

receive a moving image shot using a shooting apparatus mounted in at least one area in a facility, from the shooting means;

convert the received moving image into streamable data; and

in response to a request for guidance on the facility received via a communication network, send the converted moving image in a streaming format in real time.

[Claim 12] A computer program characterized by causing a server computer that provides an image via a communication network to:

input a moving image shot using a shooting apparatus mounted in at least one area in a facility;

convert the input moving image into streamable data and store the data in a storage apparatus; and

in response to a request for guidance on the facility received via a communication network, send the stored moving image in a streaming format.

[Detailed Description of the Invention]

[0001]

[Technical Field to which the Invention Belongs] The present invention relates to an image distribution method, an image distribution system, a computer-readable recording medium, and a computer program and, more particularly, to an image distribution method, an image distribution system, a computer-readable recording medium, and a computer program that provide images to a user terminal via a communication network.

[0002]

[Prior Art] Techniques for making reservations for the use of facilities such as accommodation facilities and amusement facilities, using user terminals such as mobile phones have been conventionally developed and some of the techniques are actually implemented. In such techniques, a user of a user terminal accesses, via the Internet, a server computer that manages facility reservations, to send reservation application information together with user information. The server computer having received the information registers a facility use plan by the user in a schedule, based on the application

information.

[0003]

[Problems to be Solved by the Invention] However, in conventional mobile communication, information obtainable from an accessed server computer upon making a reservation for the use of a facility includes merely text and still images which are recorded in advance on the server computer. Thus, there is a problem that even if a reservation is made guessing a facility's environment or the like, from the obtained information, a facility to be actually used may be different from the one imagined.

[0004]

Also, for example, exemplifying the case of making a hotel reservation, since information obtainable from a server computer that is accessed for the purpose of a reservation is limited to guidance on a room reservation, there is a problem that information on ancillary facilities other than rooms cannot be acquired.

[0005]

The present invention is made in view of such problems and an object of the present invention is to provide an image distribution method, an image distribution system, a computer-readable recording medium, and a computer program that enable to provide a variety of information to a user of a user terminal.

[0006]

[Means for Solving Problems] To attain such an object, an invention according to claim 1 is such that an image distribution method using a server computer that provides an

image via a communication network is characterized by:
receiving a moving image shot using a shooting apparatus mounted
in at least one area in a facility, from the shooting apparatus;
converting the received moving image into streamable data; and
in response to a request for guidance on the facility received
via a communication network, sending the converted moving image
in a streaming format in real time.

[0007] Also, an invention according to claim 2 is such that
the image distribution method according to claim 1 is further
characterized by: numerically converting a crowdedness state
of a shooting area, based on the shot moving image; and in
response to a request received via a communication network,
sending information on the numerically converted crowdedness
state.

[0008] Also, an invention according to claim 3 is such that
the image distribution method according to claim 1 or 2 is
further characterized by: attaching a non-contact IC tag to a
movable target; disposing a receiving apparatus for receiving
a radio wave transmitted from the non-contact IC tag, at a
predetermined location of a shooting area of the shooting
apparatus; and changing a shooting direction of the shooting
apparatus, according to detection of the non-contact IC tag by
the receiving apparatus.

[0009] Also, an invention according to claim 4 is such that
an image distribution method using a server computer that
provides an image via a communication network is characterized
by: inputting a moving image shot using a shooting apparatus

mounted in at least one area in a facility; converting the input moving image into streamable data and storing the data in a storage apparatus; and in response to a request for guidance on the facility received via a communication network, sending the stored moving image in a streaming format.

[0010] Also, an invention according to claim 5 is such that an image distribution system having a user terminal and a server computer that provides an image to the user terminal via a communication network is characterized in that the server computer includes: receiving means for receiving a moving image shot using shooting means mounted in at least one area in a facility, from the shooting means; conversion means for converting the received moving image into streamable data; and sending means for sending the converted moving image in a streaming format in real time, in response to a request for guidance on the facility received from the user terminal.

[0011] Also, an invention according to claim 6 is such that the image distribution system according to claim 5 is characterized in that numerical conversion means for numerically converting a crowdedness state of a shooting area, based on the shot moving image is further included, and the sending means sends information on the numerically converted crowdedness state.

[0012] Also, an invention according to claim 7 is such that the image distribution system according to claim 5 or 6 is characterized in that a non-contact IC tag attached to a movable target and receiving means for receiving a radio wave

transmitted from the non-contact IC tag, which is disposed at a predetermined location of a shooting area of the shooting means are further included, and the shooting means includes means for changing a shooting direction according to detection of the non-contact IC tag by the receiving means.

[0013] Also, an invention according to claim 8 is such that an image distribution system having a user terminal and a server computer that provides an image to the user terminal via a communication network is characterized in that the server computer includes: input means for inputting a moving image shot using a shooting apparatus mounted in at least one area in a facility; and storage means for converting the input moving image into streamable data and storing the data, and in response to a request for guidance on the facility received from the user terminal, the stored moving image is sent in a streaming format.

[0014] Also, an invention according to claim 9 is such that a computer-readable recording medium is characterized by recording therein a program that causes a server computer that provides an image via a communication network to: receive a moving image shot using a shooting apparatus mounted in at least one area in a facility, from the shooting apparatus; convert the received moving image into streamable data; and in response to a request for guidance on the facility received via a communication network, send the converted moving image in a streaming format in real time.

[0015] Also, an invention according to claim 10 is such that a computer-readable recording medium is characterized by

recording therein a program that causes a server computer that provides an image via a communication network to: input a moving image shot using a shooting apparatus mounted in at least one area in a facility; convert the input moving image into streamable data and store the data in a storage apparatus; and in response to a request for guidance on the facility received via a communication network, send the stored moving image in a streaming format.

[0016] Also, an invention according to claim 11 is such that a computer program is characterized by causing a server computer that provides an image via a communication network to: receive a moving image shot using a shooting apparatus mounted in at least one area in a facility, from the shooting means; convert the received moving image into streamable data; and in response to a request for guidance on the facility received via a communication network, send the converted moving image in a streaming format in real time.

[0017] Furthermore, an invention according to claim 12 is such that a computer program is characterized by causing a server computer that provides an image via a communication network to: input a moving image shot using a shooting apparatus mounted in at least one area in a facility; convert the input moving image into streamable data and store the data in a storage apparatus; and in response to a request for guidance on the facility received via a communication network, send the stored moving image in a streaming format.

[0018]

[Embodiments of the Invention] Embodiments of the present invention will be described in detail below with reference to the drawings.

[0019] (First Embodiment) FIG. 1 is a diagram showing an exemplary configuration of an image distribution system to which the present invention is applied, and conceptually shows only a portion related to the present invention. The image distribution system of the present embodiment is composed of at least a real-time moving image distribution server 109, an image-to-numerical conversion server 110, a moving image distribution server 111, and a mobile phone 102. The real-time moving image distribution server 109, the image-to-numerical conversion server 110, and the moving image distribution server 111 are interconnected with each other via a LAN (Local Area Network) 104 constructed in a hotel. Also, these servers are interconnected with the mobile phone 102 via a router 103 connected to the LAN 104, Internet 100, and a mobile communication network 101.

[0020] The real-time moving image distribution server 109 have connected thereto a video camera 105 mounted in a restaurant which is an amenity in the hotel, a video camera 106 mounted in a lobby, and a video camera 107 mounted in a child day care center, and collects moving images shot by the respective video cameras and information received from the image-to-numerical conversion server 110 and stores them in a storage apparatus provided therein and also converts the stored moving images into streaming playable data (streaming data) and

distributes the data. Also, the real-time moving image distribution server 109 has stored therein a plurality of web pages to be provided to clients who access through the Internet 100 and thus functions as a web server.

[0021] The image-to-numerical conversion server 110 receives moving images shot by the video cameras 105, 106, and 107 from the real-time moving image distribution server 109, numerically converts crowdedness states of the shooting areas, based on the moving image data, and returns them to the real-time moving image distribution server 109. Numerical conversion of crowdedness states of amenities is performed specifically by determining the rate of change between images shot at different times or the number of pixels whose colors have changed between a plurality of images within a certain period of time.

[0022] The moving image distribution server 111 has a storage apparatus 108 in which pre-shot video of rooms, the restaurant, the lobby, the child day care center or the like is converted into streaming data and the streaming data is accumulated and stored. When the moving image distribution server 111 receives a moving image distribution request from the mobile phone 102, the moving image distribution server 111 extracts streaming data according to the request, from the storage apparatus 108 and distributes the data.

[0023] Note that hardware configurations of the real-time moving image distribution server 109, the image-to-numerical conversion server 110, and the moving image distribution server 111 can be configured by generally commercially available

information processing apparatuses, such as workstations, personal computers, and video game devices, and accessory apparatuses thereof, and at least one of them functions as a server computer of the present invention. Functions related to the present invention which will be described later are implemented by, in each of the hardware configurations, a CPU, a disk apparatus, storage apparatuses such as a RAM and a ROM, an input/output apparatus, an output apparatus and the like, and a program that controls them and the like. For the real-time moving image distribution server 109, a network camera server can be used that allows a plurality of video cameras to be connected thereto and that includes a function as a web server and is capable of simultaneously transmitting information and video via the Internet.

[0024] The video cameras 105, 106, and 107 function as shooting apparatuses of the present invention and are mounted in their respective shooting areas and also make a turn or a move in response to an instruction from the real-time moving image distribution server 109 or the moving image distribution server 111, to change their shooting directions. For a shooting direction change function, a known method can be used and thus a detailed description thereof is omitted. Note that it is desirable that the video cameras 105, 106, and 107 be mounted with a distance therebetween to the extent that when a facility user is present in the shooting areas the shot images do not invade the privacy of the facility user, or shooting is performed at a level of resolution at which the privacy is not

invaded.

[0025] The mobile phone 102 is a user terminal that performs communication via the mobile communication network 101, and has an Internet connection function and also has installed thereon software including a WWW (World Wide Web) browsing function and a display portion for browsing web pages. Also, the mobile phone 102 is connected to each server via the mobile communication network 101, the Internet 100, and the router 103 by specifying a URL (Uniform Resource Locator), and displays on the display portion a playback image of a moving image distributed from the server or displays a numerically converted crowdedness state. Specification of an URL is performed by selecting a predetermined button, an area or the like on a screen displayed on the display portion based on information from a WWW server such as the real-time moving image distribution server 109 or the moving image distribution server 111. For information provided by a WWW server to implement such a process, for example, a document described in a markup language such as HTML can be used.

[0026] By the above-described configuration, moving images shot by the video cameras 105, 106, and 107 are collected by the real-time moving image distribution server 109 and each of the moving images is converted into streaming data and the data is played back in real time. This playback data is sent in a streaming format in real time, in response to a request for guidance on the facility from the mobile phone 102.

[0027] These moving images from the video cameras are sent

to the image-to-numerical conversion server 110 via the real-time moving image distribution server 109 and the LAN 104. Based on the received moving images, the image-to-numerical conversion server 110 calculates crowdedness states of the amenities in the facility where the respective video cameras are mounted, and returns this information to the real-time moving image distribution server 109.

[0028] Based on the moving images sent from the respective video cameras and numerical values of the crowdedness states received from the image-to-numerical conversion server 110, the real-time moving image distribution server 109 creates web pages for the respective shooting areas and distributes the web pages.

[0029] Also, video in which rooms are shot is stored in advance in the storage apparatus 108 of the moving image distribution server 111 as streaming data. The moving image distribution server 111 distributes, in a streaming format, data stored in the storage apparatus 108 in response to a request from the mobile phone 102.

[0030] Next, with reference to FIG. 2, an example of transition of screens displayed on the display portion of the mobile phone 102 according to the present invention will be described. Note that in the following description a screen displayed on the display portion of the mobile phone 102 is displayed based on image information sent from the real-time moving image server 109 in response to a request from the mobile phone.

[0031] When the user accesses the real-time moving image distribution server 109 using the mobile phone 102, a menu screen 201 asking the user to select an image is displayed on the display portion of the mobile phone 102. On the menu screen 201 are arranged the character string "promotion video" which is selected when advertising video for promoting the provision of hotel services is browsed and the character string "real-time video" which is selected when the facilities in the hotel are browsed. The user selects a character string by pressing a predetermined button provided on the mobile phone 102 and can thereby determine video the user wants to browse. Such a screen is not anything special and is implemented by sending a document described in a markup language such as CHTML (CompactHTML) or HDML (Handheld Device Markup Language) that is usable on a handy-type terminal such as a mobile phone or PDA (Personal DigitalAssistant), to the mobile phone from a server computer.

[0032] Here, when the "promotion video" is selected by the user pressing a predetermined button on the mobile phone 102, a menu screen 202 asking the user to select a shooting area the user wants to browse is displayed. When the user selects "rooms" on this screen, a menu screen 203 asking to select the type of room is displayed on the display portion of the mobile phone 102. When the user selects a desired room on this screen, a browsing request for the selected room is sent to the moving image distribution server 111.

[0033] When the moving image distribution server 111 receives this request, the moving image distribution server 111

extracts streaming data of a moving image of a corresponding room from the storage apparatus 108 and sends the data to the mobile phone 102. The mobile phone 102 plays back the received moving image and displays on the display portion a screen 205 including a display area 204 for the playback image.

[0034] Next, with reference to FIG. 3, another example of transition of screens displayed on the display portion of the mobile phone will be described.

[0035] When the user accesses the real-time moving image distribution server 109 using the mobile phone 102, a menu screen 201 asking the user to select an image is displayed on the display portion of the mobile phone 102. Here, when the "real-time video" is selected by the user pressing a predetermined button, a menu screen 302 asking the user to select a shooting area the user wants to browse is displayed. When the user selects the "restaurant" on this screen, a browsing request for the selected amenity is sent to the real-time moving image distribution server 109.

[0036] When the real-time moving image distribution server 109 receives this request, the real-time moving image distribution server 109 extracts data obtained by numerically converting a crowdedness state of the restaurant which is created by the image-to-numerical conversion server 110, from the storage apparatus and also generates a web page using the data and streaming data of a moving image of the restaurant and sends the web page to the mobile phone 102. The mobile phone 102 plays back the received moving image and displays on the

display portion a screen 303 including an area 304 where the received moving image of the restaurant is displayed.

[0037] (Second Embodiment) Next, an example will be described in which a real-time moving image distribution server 109 provides images unique to each user. In the present embodiment, the case is assumed in which a user browses video of his/her child placed in a child day care center in a hotel, using a mobile phone 102. In this case, when the user places his/her child in the child day care center, the child day care center side issues a user ID and a password for identifying the user, using the real-time moving image distribution server 109. The user can browse unique images using the user ID and password issued by the real-time moving image distribution server 109.

[0038] Note that in the present embodiment the system configuration is substantially the same as that of the first embodiment and thus only different points than the first embodiment are described and overlapping description is omitted.

[0039] FIG. 4 is a diagram showing a configuration of a portion of an image distribution system according to the present embodiment that is different than the first embodiment.

[0040] In the child day care center, in addition to the aforementioned video camera 107, antennas 401, 402, 403, and 404 are mounted at predetermined locations of a shooting area of this video camera. These antennas are all connected to a control unit 406 connected to an IC tag reader/writer (R/W) 407.

[0041] The control unit 406 provides channel numbers to

the individual antennas. Based on the numbers, the control unit 406 passes information on a non-contact IC tag 405 received by the antennas 401, 402, 403, and 404 to the IC tag reader/writer (R/W) 407 or passes information to be sent to the non-contact IC tag reader/writer 407, to each antenna.

[0042] A child in the child day care center carries a non-contact IC tag 405 in which a user ID of a user who is a parent of the child is recorded. The non-contact IC tag 405 is the same as, for example, those attached to items to prevent theft at CD and video shops or those attached to employee ID cards and used as building entrance cards in companies, and is a label using a wireless communication technique and is configured by, for example, disposing an IC chip on an adhesive sheet and providing a protective sheet on a top layer thereof. The IC chip of the non-contact IC tag 405 has recorded therein information such as a user ID of a using user, a name, start time of the use of the facility, and contact information, and thus by this information each using user can be identified.

[0043] Also, the non-contact IC tag 405 emits a weak radio wave and the radio wave is detected by the antennas 401, 402, 403, and 404 which function as receiving apparatuses described in the claims of the present invention, whereby data recorded in a memory in the non-contact IC tag is received.

[0044] The IC tag reader/writer 407 reads information of the non-contact IC tag received from the control unit 406 and sends the information to the real-time moving image distribution server 109.

[0045] The real-time moving image distribution server 109 stores in advance a channel number provided to each antenna by the control unit 406 and data indicating a shooting direction of the video camera 107 for shooting near an antenna corresponding to the channel number, in association with each other.

[0046] FIG. 5 is a diagram showing another example of transition of screens displayed on a display portion of the mobile phone according to the present invention. Note that in the following description a screen displayed on the display portion of the mobile phone 102 is displayed based on image information sent from the real-time moving image server 109 in response to a request from the mobile phone.

[0047] When the user accesses the real-time moving image distribution server 109 using the mobile phone 102, a menu screen 201 asking to select an image the user wants to browse is displayed on the display portion of the mobile phone 102. When the user selects the "real-time video" on this screen, a menu screen 302 asking the user to select an image is displayed. When the user selects the "child day care center" on this screen, a screen 503 to input a user ID and a password is displayed. Here, when the user inputs a user ID and a password that are received when he/she places his/her child in the child day care center, the mobile phone 102 sends the input information to the real-time moving image distribution server 109. The real-time moving image distribution server 109 performs user authentication based on the information received from the

mobile phone 102 and a pre-stored correspondence table between user IDs and passwords, and sends, when the authentication is successful, a moving image in which the child in the child day care center is shot to the mobile phone 102 in a streaming format. The mobile phone 102 displays a screen 504 including an area 505 where the received moving image is displayed.

[0048] Shooting of the child of the user is specifically performed as follows. The real-time moving image distribution server 109 having performed authentication of a user ID and a password identifies a channel number of an antenna that has detected a non-contact IC tag in which the user ID of a user for whom authentication is successful is recorded, from among a plurality of antennas mounted in the child day care center. Then, the moving image distribution server 109 sends the video camera 107 information on a shooting direction for shooting near the antenna corresponding to the identified channel number. The video camera 107 changes the shooting direction to shoot near the antenna, according to the reception of the information.

[0049] Also, when the child moves to another antenna area, the IC tag reader/writer 307 reads a radio wave from the non-contact IC tag received from an antenna in the area to which the child has moved, and sends that information to the real-time moving image distribution server 109. Then, the real-time moving image distribution server 109 instructs the video camera 107 to change the shooting direction again by the same procedural step as that described above, and in response to this instruction the video camera 107 changes the shooting direction.

By this, the child who is the shooting target can be automatically tracked by the shooting apparatus.

[0050] Although the preferred embodiments of the present invention are described above, needless to say, the present invention is not limited to such embodiments and can be implemented in various other aspects. For example, for a communication scheme of an image distribution system to which the present invention is applied, any of communication schemes including packet switching communication, circuit switching communication and the like, may be used, and for a communication mode any of communication modes including broadcast, multicast, unicast and the like, may be used.

[0051] The present invention can be applied to the provision of information on not only hotels but also other accommodation facilities, amusement facilities such as amusement parks, medical facilities such as hospitals, educational facilities such as schools, and various facilities provided for predetermined purposes, such as resort facilities, public facilities, stores, companies, and offices.

[0052] Although the aforementioned embodiments describe an example of using a mobile phone as a user terminal, the present invention is not limited thereto and a personal computer or a portable terminal, such as a PHS or PDA, that has installed thereon software to implement browsing of web information may be used.

[0053] Also, although the aforementioned embodiments describe an example in which information processing apparatuses

having different functions are connected to a LAN in a facility, it is obvious to those skilled in the art that a plurality of functions can be implemented by a single information processing apparatus.

[0054] Although, in the aforementioned embodiments, browsing of a numerically converted state of an amenity is performed using a technique of browsing display on a web page by a user terminal, information may be sent and received by electronic mail or other known communication methods.

[0055] The aforementioned display screens are an example for description and thus the arrangement, size and the like, of a display area is not limited to the examples shown in the embodiments of the present invention.

[0056] Furthermore, various other variants than the above-described embodiments are possible. However, as long as the variants are based on the technical idea described in the scope of claims, the variants fall within the technical scope of the present invention.

[0057]

[Effect of the Invention] As described above, according to the present invention, by using a portable terminal that supports the Internet, moving images of amenities in a facility the user wants to use can be browsed.

[0058] The crowdedness states of a restaurant, a lobby or the like of a hotel can be checked in real time by a numerical value.

[0059] Furthermore, the facility side can obtain an effect

of being able to provide unique images according to individual customers' requests.

[Brief Description of the Drawings]

[FIG. 1] A diagram showing an exemplary configuration of an image distribution system to which the present invention is applied.

[FIG. 2] A diagram showing an example of transition of images displayed on a display portion of a mobile phone.

[FIG. 3] A diagram showing an example of transition of images displayed on the display portion of the mobile phone.

[FIG. 4] A diagram showing an exemplary configuration of an image distribution system to which the present invention is applied.

[FIG. 5] A diagram showing an example of transition of images displayed on a display portion of a mobile phone.

[Description of Reference Numerals]

100: INTERNET

101: MOBILE COMMUNICATION NETWORK

102: MOBILE PHONE

103: ROUTER

104: LAN

105, 106, and 107: VIDEO CAMERA

108: STORAGE APPARATUS

109: REAL-TIME MOVING IMAGE DISTRIBUTION SERVER

110: IMAGE-TO-NUMERICAL CONVERSION SERVER

111: MOVING IMAGE DISTRIBUTION SERVER

401, 402, 403, and 404: ANTENNA

405: NON-CONTACT IC TAG

406: CONTROL UNIT

407: IC TAG READER/WRITER









